

Simplify each rational expression.

1)  $\frac{x^2 + 4x - 5}{18} \cdot \frac{6}{x^2 - x} =$  1) \_\_\_\_\_

2)  $\frac{x+5}{2x-8} \cdot \frac{5x^2-5x-30}{10x^2+70x+100} =$  2) \_\_\_\_\_

3)  $\frac{14x^2-7x-21}{14x-28} \cdot \frac{x+1}{3x-6} =$  3) \_\_\_\_\_

4)  $\frac{x^{12}}{5} \cdot \frac{15}{x^4} \cdot \frac{x^3}{9} =$  4) \_\_\_\_\_

5)  $\frac{x^2+5x+6}{x^2+2x-3} \div \frac{10x+20}{10} =$  5) \_\_\_\_\_

6)  $\frac{6x^2+30x}{x^2+6x+5} \div \frac{x^2+4x+4}{x^2-x-6} =$  6) \_\_\_\_\_

7)  $\frac{x^2-9}{x^2+2x-8} \cdot \frac{x^2+9x+20}{x^2-3x} =$  7) \_\_\_\_\_

8)  $\frac{4x^2+27x-7}{9x^2+12x-5} \cdot \frac{4x^2-7x+3}{2x^2+13x-7} =$  8) \_\_\_\_\_

9)  $\frac{14x^3-9}{27} \div \frac{-6x^2}{-3} = \frac{7 \cdot x \cdot -2}{-3 \cdot 1 \cdot 1} = \frac{-14x}{-3} = \frac{14x}{3}$  9) \_\_\_\_\_

10)  $\frac{x^4-81}{3x^2+27} \div \frac{x^2-x-12}{3x} =$  10) \_\_\_\_\_

11)  $\frac{4x-8}{x^2-x-6} \cdot \frac{x^2-9}{x^3+x^2-6x} =$  11) \_\_\_\_\_

12)  $\frac{x^2+6x+9}{x^2+10x+24} \cdot \frac{x^2+3x-18}{x+3} =$  12) \_\_\_\_\_

13)  $\frac{3x^3+24x^2}{x^2+18x+80} \div \frac{x-9}{x^2+20x+100} =$  13) \_\_\_\_\_

14)  $\frac{\frac{x^2-y^2}{5x^3y^2}}{\frac{4x+4y}{15x^2y^5}} = \frac{x^2-y^2}{5x^3y^2} \cdot \frac{15x^2y^5}{4x+4y} = \frac{(x-y)(x+y)}{15x^3y^2} \cdot \frac{15x^2y^5}{4(x+y)} = \frac{3y^3(x-y)}{4x}$  14) \_\_\_\_\_

15)  $\frac{x^2-5x+6}{x^2-8x+15} \cdot \frac{x-5}{x-2} \div \frac{x^2-9}{x^2+3x} =$  15) \_\_\_\_\_

Homework: 3/25/13  
p. 10 & 11

QUIZ TOMORROW

H

